CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO.

FOR
SYAR INDUSTRIES, INC.
SYAR MADISON PLANT
YOLO COUNTY

This monitoring and reporting program (MRP) incorporates requirements for monitoring the aggregate wash water settling ponds and groundwater. This MRP is issued pursuant to Water Code 13267. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer.

All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. The time, date, and location of each grab sample shall be recorded on the sample chain of custody form. Field test instruments (such as those used to measure pH and dissolved oxygen) may be used provided that:

1. The operator is trained in the proper use and maintenance of the instruments;
2. The instruments are field calibrated prior to each monitoring event;
3. The instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and
4. Field calibration reports are submitted as described in the "Reporting" section of this MRP.

POND MONITORING

Each pond that receives wastewater shall be inspected weekly and monitored as follows:

Constituent/Parameter	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Freeboard[1]	0.1 Feet	Measurement	Weekly	Monthly
Berm Condition[2]	N/A	Observation	Weekly	Monthly

[1]Freeboard shall be measured from the lowest point of overflow.
[2]Evidence of leakage or overflow shall be noted.

WASTEWATER MONITORING

A composite sample shall be obtained from process wash water pond PWP-3. The composite sample shall be comprised of at least four equal aliquots obtained from different sampling locations on the same day, and shall be thoroughly mixed in a clean plastic or glass container. At a minimum, the Discharger shall monitor the wastewater in the pond as follows:

Constituent/Parameter	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Influent flow	gpd	Flow Meter or Pump Run Times	Daily	Monthly
Nitrate (as NO_3)	mg/L	Composite	Monthly	Monthly
pH	PH units	Composite	Monthly	Monthly
Total dissolved solids	mg/L	Composite	Monthly	Monthly
Total coliform organisms[1]	MPN/100 ml	Composite	Monthly	Monthly
Dissolved Metals[2,3]	μg/L	Grab	Annual	Annual[5]
Total Recoverable Mercury (non-filtered)[4]	ng/L	Grab	Semi Annual	Semi Annual[6]

[1]Using a minimum of 15 tubes or three dilutions.
[2]At a minimum, the following metals shall be included: aluminum, antimony, arsenic, total chromium, hexavalent chromium, copper, iron, lead, manganese, magnesium, molybdenum, nickel, selenium, silver, thallium, vanadium, and zinc. Analytical methods shall be selected to provide detection limits below the limiting Water Quality Goal for each constituent.
[3]Samples shall be filtered through a 0.45 micron filter prior to preservation.
[4]The total recoverable mercury detection limit shall be no more than 5 ng/L.
[5]Included in the Annual Monitoring Report.
[6]Included in the January and July monthly reports.

GROUNDWATER MONITORING

The Discharger shall monitor groundwater quality using existing groundwater monitoring wells (MWs) 3, 9, 10, and 11 beginning with the third quarter 2006 sampling event.

Prior to construction of any new groundwater monitoring wells, the Discharger shall submit plans and specifications to the Board for review and approval. Once installed, all new wells shall be added to the MRP, and shall be sampled and analyzed according to the schedule below.

Groundwater elevations shall be measured prior to purging. Each well shall be purged of at least three well volumes until temperature, pH and electrical conductivity have stabilized prior to sampling. Depth to groundwater shall be measured to the nearest 0.01 feet. Water table elevations shall be calculated based on surveyed wellhead elevations and used to determine groundwater gradient and direction of flow. Groundwater samples shall be collected using approved EPA methods. Groundwater monitoring shall include, at a minimum, the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Depth to groundwater	0.01 Feet	Measurement	Quarterly	Quarterly
Groundwater elevation	Feet	Calculated	Quarterly	Quarterly
Gradient	Feet	Calculated	Quarterly	Quarterly
Flow direction	Degrees	Calculated	Quarterly	Quarterly

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Mercury, total	mg/L	Grab	Quarterly	Quarterly
Nitrate (as NO_3)	mg/L	Grab	Quarterly	Quarterly
pH	pH Units	Grab	Quarterly	Quarterly
Total dissolved solids	mg/L	Grab	Quarterly	Quarterly
Dissolved Metals[1,2]	μg/L	Grab	Annual	Annual[4]
Total Recoverable Mercury (non-filtered)[3]	ng/L	Grab	Annual	Annual[4]

[1]At a minimum, the following metals shall be included: aluminum, antimony, arsenic, total chromium, hexavalent chromium, copper, iron, lead, manganese, magnesium, molybdenum, nickel, selenium, silver, thallium, vanadium, and zinc. Analytical methods shall be selected to provide detection limits below the limiting Water Quality Goal for each constituent.
[2]Samples shall be filtered through a 0.45 micron filter prior to preservation.
[3]The total recoverable mercury detection limit shall be no more than 5 ng/L.
[4]Included in the Annual Monitoring Report.

REPORTING

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., effluent, pond, etc.), and reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate compliance with waste discharge requirements and spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported in the next scheduled monitoring report.

As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all Groundwater Monitoring Reports shall be prepared under the direct supervision of a Registered Engineer or a Professional Geologist and signed/stamped by the registered professional.

A. Monthly Monitoring Reports

Monthly Monitoring Reports shall be submitted to the Regional Board on the **1st day of the second month following sampling** (i.e. the January Report is due by 1 March). At a minimum, the Monthly Monitoring Report shall include:

1. Results of pond and wastewater monitoring.
2. A map depicting the locations of all active wastewater ponds, storm water ponds, and the locations where freeboard is measured.
3. A comparison of monitoring data to the discharge specifications and an explanation of any violation of those requirements. Data shall be presented in tabular format.
4. If requested by staff, copies of laboratory analytical report(s).

5. A calibration log verifying calibration of all monitoring instruments and devices used to comply with the prescribed monitoring program.

B. Quarterly Monitoring Reports

The Discharger shall establish a quarterly sampling schedule for groundwater monitoring such that samples are obtained approximately every three months. Beginning with the third quarter 2006 sampling event, Quarterly Monitoring Reports shall be submitted to the Board by the **1st day of the second month after the quarter** (i.e. the January-March quarter is due by May 1st) each year. The Quarterly Monitoring Report shall include the following:

1. Results of groundwater monitoring, including any groundwater elevation and water quality data obtained in accordance with the mining permit issued by Yolo County.
2. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities for the groundwater monitoring. The narrative shall be sufficiently detailed to verify compliance with the WDRs, this MRP, and the Standard Provisions and Reporting Requirements. The narrative shall be supported by field logs for each well documenting depth to groundwater; parameters measured before, during, and after purging; method of purging; calculation of casing volume; and total volume of water purged;
3. Calculation of groundwater elevations, an assessment of groundwater flow direction and gradient on the date of measurement, comparison of previous flow direction and gradient data, and discussion of seasonal trends if any;
4. A narrative discussion of the analytical results for all groundwater locations monitored including spatial and temporal tends, with reference to summary data tables, graphs, and appended analytical reports (as applicable);
5. A comparison of monitoring data to the groundwater limitations and an explanation of any violation of those requirements;
6. Summary data tables of historical and current water table elevations and analytical results;
7. A scaled map showing relevant structures and features of the facility, the locations of monitoring wells and any other sampling stations, and groundwater elevation contours referenced to mean sea level datum;
8. Copies of laboratory analytical report(s) for groundwater monitoring.

C. Annual Monitoring Report

An Annual Monitoring Report shall be prepared as the fourth quarter monitoring report. The Annual Monitoring Report shall include all monitoring data required in the monthly/quarterly schedule and shall be submitted to the Regional Board by **1 February** each year. In addition to the data normally presented in the Quarterly Monitoring Reports, the Annual Monitoring Report shall include the following:

1. The contents of the regular groundwater monitoring report for the last sampling event of the year;

2. If requested by staff, tabular and graphical summaries of all data collected during the year;
3. The total wastewater flow for the year;
4. An evaluation of the groundwater quality beneath the wastewater ponds;
5. A discussion of compliance and the corrective actions taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements;
6. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program;
7. The results for analyses that are performed annually (as set forth above);
8. If pump run times are used to measure wastewater flows, then the pump(s) shall be recalibrated on an annual basis, and the Annual Report shall include a Flow Measurement Verification Report containing the information listed in Provision No. E.2.d.
9. A summary of information on the management and disposal of sediments;
10. A forecast of influent flows for the coming year, as described in Standard Provision No. E.4.

A transmittal letter shall accompany each self-monitoring report. The letter shall discuss any violations during the reporting period and all actions taken or planned for correcting violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain a statement by the Discharger or the Discharger's authorized agent, under penalty of perjury, that to the best of the signer's knowledge the report is true, accurate, and complete.

The Discharger shall implement the above monitoring program as of the date of this Order.

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PAMELA C. CREEDON, Executive Officer

GJC:9-Jun-06